FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT

DRAFT FOR PUBLIC COMMENT

U.S. Department of Energy
Golden Field Office

U.S. Offshore Wind: Advanced Technology Demonstration Projects

Funding Opportunity Announcement Number: DE-FOA-0000410

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Issue Date:	**02/29/2012 (tentative)**
Letter of Intent Due Date:	**03/30/2012 (tentative)**
Application Due Date:	**05/31/2012, 11:59 PM Eastern Time (tentative)**

REGISTRATION REQUIREMENTS

There are several one-time actions before submitting an Application in response to this Funding Opportunity Announcement (FOA), as follows:

- Register and create an account on EERE Exchange at https://eere-exchange.energy.gov/. This account will then allow the user to register for any open EERE FOAs that are currently in EERE Exchange. It is recommended that each organization or business unit, whether acting as a team or a single entity, use only one account as the contact point for each submission.

  The applicant will receive an automated response when the Letter of Intent and Application is received. This will serve as a confirmation of receipt. Please do not reply to the automated response. The applicant will have the opportunity to re-submit a revised Letter of Intent or Application for any reason as long as the relevant submission is submitted by the specified deadline. The Users' Guide for Applying to the Department of Energy EERE Funding Opportunity Announcements is found at https://eere-exchange.energy.gov/Manuals.aspx.

  The EERE Exchange registration does not have a delay; however, the remaining **registration requirements below could take several weeks to process and are necessary in order for a potential applicant to receive an award under this announcement**. Therefore, although not required in order to submit an Application through the EERE Exchange site, **all potential applicants lacking a DUNS number, or not yet registered with CCR or FedConnect should complete those registrations as soon as possible**.
  Questions related to the registration process and use of the EERE Exchange website should be submitted to: EERE-ExchangeSupport@hq.doe.gov

- Obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number (including the plus 4 extension, if applicable) at http://fedgov.dnb.com/webform

- Register with the Central Contractor Registry (CCR) at https://www.bpn.gov/ccr/default.aspx . Designating an Electronic Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in CCR registration. Please update your CCR registration annually.

- Register in FedConnect at https://www.fedconnect.net/. To create an organization account, your organization's CCR MPIN is required. For more information about the CCR MPIN or other registration requirements, review the FedConnect Ready, Set, Go! Guide at https://www.fedconnect.net/FedConnect/PublicPages/FedConnect_Ready_Set_Go.pdf

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SECTION I – FUNDING OPPORTUNITY DESCRIPTION

A. Background

In developing a national energy strategy, the United States (U.S.) has a number of objectives, including increasing economic growth, improving environmental quality, and enhancing national energy security. Wind power contributes to these objectives through the deployment of clean, affordable, reliable, and domestic energy. To achieve U.S. wind generation objectives, multiple goals must be met, such as:

- Reducing the cost of wind energy compared to current non-renewable sources of U.S. energy production - fossil fuels and nuclear;
- Providing efficient and reliable delivery of electric power systems adding transmission capacity where needed;
- Leveraging diverse wind energy sources and geographic distributions reflected in utility scale land-based wind, offshore wind, and distributed wind;
- Inspiring scientific and engineering innovation at system, component, and operational levels;
- Reducing or eliminating barriers including radar interference, environmental impacts, siting conflicts, and redundant permitting or approval processes;
- Attracting investment with stable policies that promote equitable subsidization with other power sources and recognition of total carbon costs;
- Understanding and addressing the public's concerns and issues with renewable energy sources.

In FY 2011, the Wind and Water Power Program within the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE) released a formal Offshore Wind Innovation and Demonstration (OSWInD) Initiative, consistent with the goals listed above, to promote and accelerate responsible commercial offshore wind development in the U.S.

With over 4000 GW of gross potential that is relatively close to key load centers, offshore wind energy can help the nation reduce its greenhouse gas emissions, diversify its energy supply, provide cost-competitive electricity to key coastal regions, and stimulate economic revitalization of key sectors of the economy. However, if the nation is to realize these benefits, key barriers to the development and deployment of offshore wind technology must be overcome, including the relatively high current cost of energy, technical challenges surrounding installation and grid interconnection, and the untested permitting or approval processes.

B. OSWInD Objectives

On February 7, 2011, DOE, in partnership with the Department of the Interior (DOI), released the National Offshore Wind Strategy. The Strategy addresses two critical objectives in pursuit of overcoming the aforementioned barriers:

- Reducing the cost of energy through technology development to ensure competitiveness with other electrical generation sources, and
- Reducing deployment timelines and uncertainties limiting U.S. offshore wind project development.

To realize these objectives, OSWInD activities have been planned in the following focus areas:

- Research Addressing Market Barriers in order to facilitate deployment and reduce technical challenges facing the entire industry;
- Technology Research and Development that will reduce cost of offshore wind energy through innovation and testing;
- Advanced Technology Demonstration Projects that verify innovative designs and technology developments and validate full performance and cost under real operating and market conditions.

Activities have been initiated and are on-going in the first two focus areas. Under this Funding Opportunity Announcement (FOA), DOE is seeking applications under the third focus area listed above – Advanced Technology Demonstration Projects.

C. Scope

DOE seeks to provide support for regionally-diverse Advanced Technology Demonstration Projects through collaborative partnerships.

The primary goals of the Advanced Technology Demonstration Projects are to:

1. *Install innovative offshore wind systems in U.S. waters in the most rapid and responsible manner possible, and*
2. *Expedite the development and deployment of innovative offshore wind energy systems with a credible potential for lowering the levelized cost of energy (LCOE) below 10 ¢/kWh or the local "hurdle" price at which offshore wind can compete with other regional generation sources without subsidies.*

Secondary goals are numerous and include but are not limited to:

1. *Establishing world-class demonstration and test capabilities in conjunction with commercial developments to support validation of innovative technology , installation methods, and operation and maintenance strategies,*
2. *Establishing and validating the infrastructure required for offshore wind plant installation and operation,*
3. *Supporting development of a world-leading domestic offshore wind industry utilizing innovative technologies adapted to the North American environment and operating parameters,*
4. *Evaluating current siting and approval processes and identifying opportunities for improvement, and*
5. *Addressing public concerns associated with the concept of offshore wind.*

By providing funding, technical assistance, and government coordination to accelerate deployment of these demonstration projects, DOE can help eliminate uncertainties, mitigate risks, and help create a robust U.S. Offshore Wind Energy Industry.

Given these goals, DOE seeks technology demonstration projects that combine innovation with pathways for substantial cost reduction opportunities. DOE will review all viable applications, including high risk concepts, but an emphasis will be put on Technology Readiness.

This FOA is focused solely on offshore wind energy projects. Applications for marine and hydrokinetic (MHK) energy sources, whether stand-alone or combined with offshore wind turbine support structures, will not be accepted.

Significant innovations must be realized in the US marketplace in order for an economically-viable offshore wind industry to develop in this country. The DOE has a goal to reduce the national average LCOE of offshore wind plants below 10 ¢/kWh by 2020 with further improvements beyond 2020 needed to compete with conventional generation on an unsubsidized basis. Projects under this FOA will be the major efforts that DOE will use to assess progress towards these national-scale goals. DOE believes it is critical to validate cost and performance of new technology in order to address barriers associated with access to affordable financing in the gigawatt (GW)-scale commercial deployment. Figure 1 shows a potential roadmap to cost competitiveness. As shown below, the Offshore Wind Cost Reduction Cascade requires attention to the following two key areas:

1. The development of innovative turbine architectures and advanced wind plant infrastructure to reduce plant costs and increase efficiency.

2. The validation of construction, generation and operating expenses to reduce financing costs.

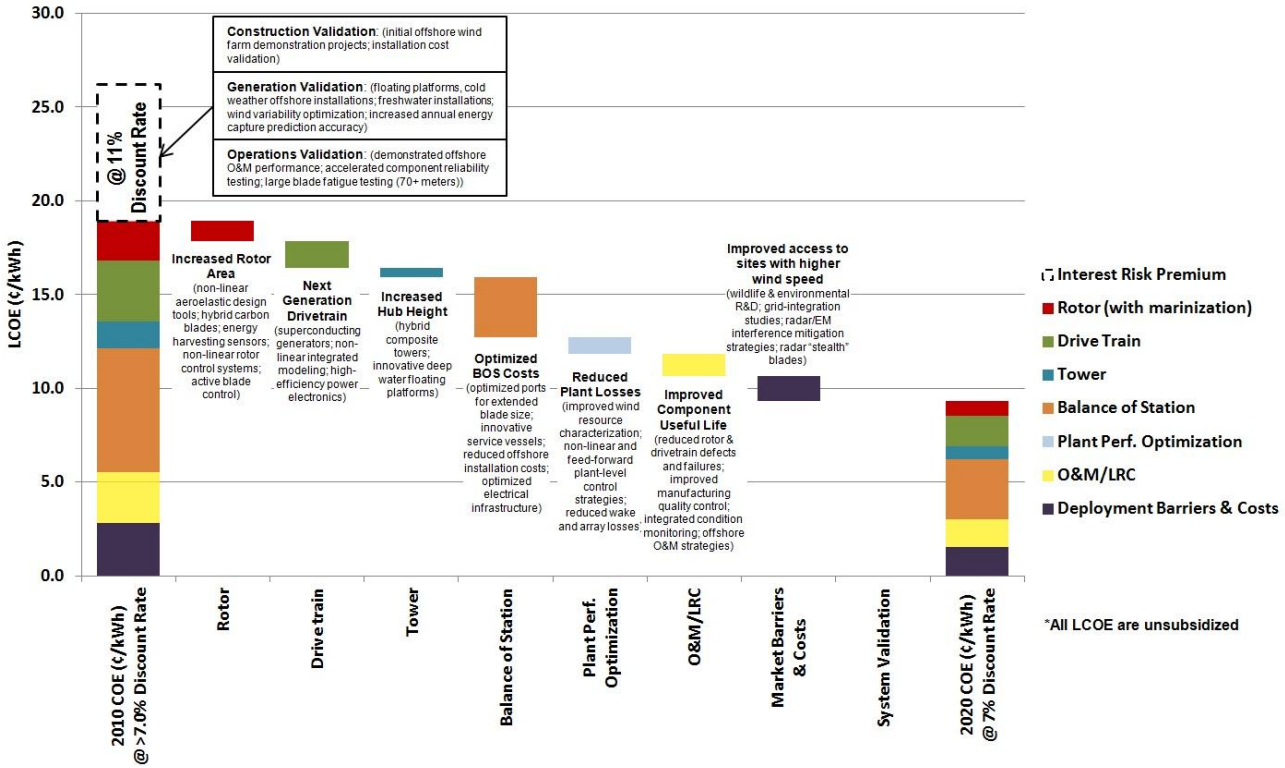

Figure 1
Offshore Wind Cost Reduction Cascade

Given the previously-stated goals and two key areas for LCOE reduction, DOE is seeking partnerships for projects within the two Topic Areas delineated in Sections II and III of this announcement.

Topic Area 1: "Accelerating Pilot Deployment"
The demonstration project funded under Topic Area 1 will be a "fast track" pilot project targeted for commissioning by the end of calendar year 2014. Therefore significant planning and preparation must already be in place.

Topic Area 2: "Innovating Commercial Viability"
Topic Area 2 technology demonstration projects will typically be broader in scope and of longer duration, and will focus more squarely on bringing technological innovation to market. Topic Area 2 will be executed in two budget periods with a down-select process in between.

Applicants are invited to submit responses under one or both of the Topic Areas. However, separate applications must be submitted for each Topic Area and one project proposal will not win an award in both Topic Areas.

Within these Topic Areas, applicants will be asked to indicate how DOE funds would be used within the partnership and specifically how the funds will lead to installation of the demonstration project. Uses of DOE funds could include but are not limited to:

- Demonstrating full-scale innovative wind turbine technology that will be used in commercial offshore wind farm deployments. "Full Scale" is defined as a wind turbine or turbines and related site infrastructure, including electrical grid connection, at a commercial utility class (multi-megawatt scale);
- Improving innovative engineering and related support activities for offshore foundations, electrical systems, facility infrastructure, operation, and installation systems and methods in commercial projects;
- Addressing specific non-technical barriers, such as environmental or socioeconomic issues or efficiency in Federal, State, or local permitting, planning and approval processes as they relate to the proposed project;
- Collecting and analyzing performance, engineering, operations, and cost data of novel technologies used as part of the deployment strategy for up to five years.

DOE may fund specific technical research, engineering, and planning activities that demonstrably enhance the timely execution of innovative commercial offshore wind energy projects and ultimately lead to project installation within the desired timeline. DOE funds may also support capital expenditures within these projects for materials or equipment that are clearly necessary to achieve the technology demonstration benefits of the project.

Projects will be considered from all geographical regions, water depths, and technology areas, including innovative technologies. Applicants are encouraged to convey how project success will advance industry expertise in engineering, facility design, installation, performance evaluation and will help improve efficiencies in key Federal, State, or local siting, permitting, and environmental compliance processes such as the National Environmental Policy Act. Examples should be

provided which convey how the project will reduce risk and uncertainty to the key institutions, such as the public at large and the finance industry. Examples of potential candidate projects include, but are not limited to, a stand-alone single turbine, multiple turbines, or turbines that are a first phase of a planned larger commercial project.

It should be understood that all performance, engineering, operations, and cost data gathered by efforts supported under this funding opportunity will be used by DOE to further the existing knowledge-base for the benefit of the wind industry. All data will be provided to DOE, or an approved 3rd party, and will be treated as set forth in Section VIII.

Applicants are also encouraged to indicate how DOE or other Federal Agencies could assist the proposed project with non-monetary assistance, such as obtaining Research Leases in Federal Waters.

D. Deployment Timeline

DOE expects Topic Area 1 project applicants to present a credible timeline leading to commissioning by the end of calendar year 2014. For Topic Area 2, commissioning is expected to occur between 2015 and 2017. See Sections II and III for specific Topic Area deliverables and schedule expectations. Applications must include a detailed discussion of the deployment timeline for the proposed project. The schedule discussion should include feasible, innovative, and collaborative solutions to addressing current market barriers to deployment. It is understood that many factors beyond the applicant's control will affect the deployment timeline for any given project. Successful applicants must clearly convey an understanding of the relevant barriers, a plan for overcoming those barriers, and the extent to which the DOE funding and participation on the project can contribute to eliminating the barriers.

E. Teaming

DOE encourages applications which present an integrated set of activities undertaken by broad teams or consortia of organizations with world-class capabilities and resources. The membership of such a team or consortium should be able to execute the project from the time of award and could include an experienced energy project developer, a research organization specializing in development of wind power and related technologies, universities for research and/or public policy, a power purchaser, the regional transmission or independent system operator as appropriate, an original equipment manufacturer (OEM) team capable of manufacturing a complete offshore wind system, and installation specialists with experience in the marine operating environment. In addition, applicants are expected to provide documented evidence that the responsible Federal, State, or local Authorities Having Jurisdiction (AHJs) over siting, permitting, and environmental compliance are aware of the project and are in the process of evaluating any outstanding permits or other necessary authorizations. While the specific makeup of the proposed team is at the discretion of the applicant, the applicant must provide convincing arguments that the team is highly qualified, experienced, and capable of performing all aspects of the proposed work scope and fulfilling the objectives of the announcement from the time of the award. It is understood that the consortium members will have varying levels of commitment and engagement within the team, varying from full partners to occasional contributors, and this involvement must be explicitly stated in the application.

F. Project Structure

Environmental Review and Approval – Federal agencies are responsible for conducting the environmental review process required by the National Environmental Policy Act [42 United States Code (U.S.C.) 4321 et seq.; NEPA] and related environmental statutes, regulations, permits, and approvals. NEPA applies to all federal grant programs and requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions. While NEPA compliance is a federal agency responsibility and the ultimate decisions remain with the federal agency, all projects selected for an award will be required to assist in the timely and effective completion of the NEPA process in the manner most pertinent to their proposed project. Guidance with respect to NEPA can be found in Appendix F.

For Topic Area 2 applications only, projects will be divided into two Budget Periods with a stage gate separating Budget Period I and II. This stage gate will represent a down-select decision point for project continuation and subsequent funding. Although applications must include and will be evaluated on their schedule, cost estimate, and work scope for both Budget Periods, all selected applicants will initially receive funding only for Budget Period I. Federal funding is subject to annual Congressional appropriations and should be treated as estimates.

Complete application requirements can be found in Section IV.

SECTION II – TOPIC AREA 1: "ACCELERATING PILOT DEPLOYMENT"

A. Description

To accelerate the deployment of offshore wind technology in the United States, Topic Area 1 of the Advanced Technology Demonstration Projects FOA seeks to install one or more offshore wind systems in U.S. waters in the most rapid and responsible manner possible. The intent is to reduce uncertainty with respect to the future of the offshore wind industry in the United States, while evaluating technology options targeted at improving the cost-effectiveness of future offshore wind systems; setting an example for full scale commercial offshore wind farms with respect to permitting, approvals, and environmental reviews; establishing a baseline LCOE; reducing financing risk; addressing issues raised by the public; beginning the establishment of infrastructure for offshore wind installation, operations and maintenance; and contributing to the evaluation of offshore wind technology and economic potential in the U.S.

One award is anticipated for Topic Area 1 for the installation of one or more offshore wind turbines in State or Federal waters. The award is open to all geographic regions (e.g. Atlantic, Great Lakes, Pacific, Gulf of Mexico) and all water depths. Applicants with locations that are currently planned for commercial development that have leases and environmental reviews in place or substantially complete are highly encouraged to apply.

Submitted project descriptions are to be for complete offshore wind plants including one or more multi-megawatt turbines and all electrical cabling between turbines and shore, electrical substations and connection to a grid. The project plans must clearly illustrate that all relevant scheduling and permitting factors have been considered, supporting the conclusion that the wind turbine(s) can be installed and commissioned no later than the end of calendar year 2014, and generating power to a grid, barring any delays not under control of the applicant. In the event that no project applications credibly demonstrate a high likelihood of completion by the end of 2014, DOE reserves the right to select the project that, in its estimation, present the highest potential to achieve a completion date closest to this target.

Revenue from electricity generation will belong to the awardee and shall not be used in the calculation of cost share. Metocean, turbine, structural response, system performance, engineering, operations, cost, and any other data collected will be provided to DOE or approved 3rd party. This data will be protected as defined in Section VIII.

Applicants are encouraged to indicate in their applications how DOE or other Federal Agencies could apply non-monetary assistance in supporting the project.

B. Application Review Information and Evaluation Criteria

1. Initial Review Criteria for Topic Area 1

Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the applicant is eligible for an award; (2) all mandatory requirements are satisfied; and (3) the proposed project is responsive to the objectives of the funding opportunity announcement. If an application fails to meet these requirements, it may be deemed non-responsive and eliminated from full Merit Review.

Responsive applications will then be reviewed by DOE to gauge the readiness of proposed projects with respect to the necessary approvals and compliance with the NEPA. The results of this DOE review will be provided to the Merit Review Panel for use in their evaluation process as descibed in Section II - C. Review and Selection Process.

2. Merit Review Criteria for Topic Area 1

The following merit review evaluation criteria will be used in the comprehensive evaluation of applications for Topic Area 1. For each criterion, the weighting (out of a total of 100%) is indicated to show its relative importance.

Criterion I: Technical Concept and Impact (Weight: 20%)

- The overall relevance and applicability of the technical concept and approach in addressing the specific objectives of the FOA;
- Degree of innovation for the proposed approach and the extent to which the proposed concept offers advantages over other solutions or approaches from a cost of energy perspective;
- Convincing rationale that the proposed technology is ready for full-scale demonstration. Evidence should include an assessment of the Technology Readiness Level (TRL) as described in Appendix G, experimental data and results from smaller-scale work, papers, or other relevant prior work;
- Demonstration that the proposed site is at or near a location planned for commercial development of offshore wind and has proximity to necessary manufacturing, ports, and vessels to be used in the project;
- A thorough characterization of the installation and operational environment at the proposed site including at least one year of measured metocean data as well as extreme events, e.g., 50 year wave and inflow events that are site specific or extrapolated by an acceptable methodology from other sources;
- Technical and performance specifications for the turbine to be used;
- Details on port facilities and vessels to be used for installation, operation and maintenance including information on vessel mobilization;
- Likelihood that proposed project will lead to commercial development, including commercialization in the U.S. of the turbine and other technical solutions proposed for the project; and
- Proposed data collection and performance validation plan to achieve IEC type certification (if applicable) and quantify turbine and system technical and economic performance for a five (5) year period.

Criterion II: Reduction in Cost of Energy (Weight: 20%)

- Extent to which a detailed cost of energy (COE) analysis, including all assumptions, calculations, and sources used to calculate the impact of the proposed design on COE, is presented for the proposed project with rigor, clarity, transparency and completeness; See Appendix H for example and calculation template to be submitted; and
- Extent to which the COE analysis for proposed project can be projected to show a clear path from the demonstration-scale to cost-effective commercial-scale deployment

below 10 ¢/kWh or the local "hurdle" price at which offshore wind can compete with other regional generation sources without subsidizes.

Criterion III: Work Plan (Weight: 10%)

- The relevance and clarity of the goals and objectives of the project;
- The clarity and adequacy of the product-oriented work breakdown structure including detailed task descriptions and resource loaded schedule;
- The clarity and adequacy of project deliverables including:
  a) The specific end result;
  b) The proposed methods for publicly disseminating project-generated information, including but not limited to, the final report, to the domestic offshore wind industry, and to related stakeholder sectors;
  c) Long term project ownership and management plan; and
  d) Inclusion of a health and safety plan.

Criterion IV: Project Management (Weight: 10%)

- The knowledge and experience in project management techniques, methods, and practices to successfully complete the project scope on budget and on schedule;
- The project management practices that will be fully integrated with financial and business systems to measure project progress and enhance the probability of successful completion;
- The identification and consideration of risk, and the use of effective risk management and change control systems that will be put into full effect early in the project and used to mitigate impacts; and
- The approach to managing the team and ensuring communication among team members.

Criterion V: Schedule and Scheduling Factors (Weight 30%)

- The degree to which documented progress has already been made in siting, permitting, approval processes, environmental compliance, grid connection and public acceptance, including evidence that the responsible Federal, State, and local Authorities Having Jurisdiction (AHJs) are aware of the project and are in the process of evaluating any other necessary authorizations;
- The degree to which progress has already been made in selecting equipment and installation vendors and documenting all costs including turbines, towers, foundations or platforms and mooring systems, electrical cabling between turbines and to shore, electrical substation, port, vessel and mobilization costs;
- The thoroughness and feasibility of the overall project workplan and schedule, including the clarity, adequacy and timing of major milestones; and
- The degree to which credible evidence is presented indicating that the project can be commissioned no later than end of calendar year 2014.

Criterion VI: Team Qualifications (Weight: 10%)

- The capability of the proposed team to address all aspects of the proposed work;

- The clarity and appropriateness of the roles of the team members;
- The relevant experience of each organization on the proposed team in performing similar projects and the allocation of responsibility commensurate with this experience;
- The adequacy of the education, professional training, technical skills, and work experience of the Principal Investigator (PI) and other key personnel, including personnel from team member organizations; and
- The level and reasonableness of the time commitment of the PI and other key personnel, including personnel from team member organizations.

3. Program Policy Factors for Topic Area 1

The selection official may consider the following program policy factors in the selection process:

1. Balance of complementary technologies to meet Program goals.
2. Comparatively significant benefits for the amount of funding requested.
3. Geographic diversity.
4. Greatest commercial potential for gigawatt-scale deployment in the US market.
5. Greatest advancement of the national knowledge base.
6. Highest long-term impact on the US offshore wind industry while ensuring that a majority of the Federal funding remains in the US.
7. Robustness of the proposed pathway to commercial viability.

C. Review and Selection Process

1. Application Submission and Merit Review Step 1: Application and Evaluation

See Section XI.B for Submission Forms and Guidelines.

Applications that pass the initial review will be subject to a Merit Review in accordance with the guidance provided in the "Department of Energy Merit Review Guide for Financial Assistance". This guide is available at: http://energy.gov/sites/prod/files/meritrev.pdf.

It is very important that those documents, Project Abstract and Project Narrative file, that will be used during the Merit Review Process do not contain any Personally Identifiable Information as described in Appendix B.

2. Selection for Merit Review Step 2: Site Visit

Upon successful completion of Step 1, selected applicants will receive a formal invitation to participate in Step 2: Site Visit. Applicants will be notified by the Merit Review Committee Chairperson to prepare for and schedule the Site Visit during the week of (TBD). The Site Visit will consist of the following:

a.) Oral presentation of application material (~2 hours)

b.) Question, answer, and clarifications with Merit Review Panel (~3 hours)
- Merit Review Panel will develop a bank of 25 clarification questions during the Merit Review Process.
- This 25 question bank will be provided to the Step 2 applicants prior to the Site Visit.

- Merit Review Panelists will use this 25 question bank as a guide during the question and answer session.
- Applicants will not be allowed an opportunity to revise their applications.

c.) Facilities tour (~2 hours)

Those applicants not selected for Merit Review Step 2 will be notified by the Merit Review Committee Chairperson upon completion of Step 1.

3. Selection

Applicants that are selected for negotiation of an award will be notified by the Merit Review Committee Chairperson.

The Selection Official may consider the merit review advisory panel recommendations, program policy factors, and the amount of funds available in making selection decisions.

4. Discussions and Award

Government Discussions with Applicant: The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR part 600; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

D. Anticipated Notice of Selection and Award Dates

DOE anticipates notifying applicants selected for award by August 2012 and making awards by September 2012 subject to the availability of Congressional appropriations.

SECTION III – TOPIC AREA 2: "INNOVATING COMMERCIAL VIABILITY"

A. Description

Significant innovations must be realized in the US marketplace in order for an economically-viable offshore wind industry to develop in this country. A holistic systems design approach addressing all aspects of hardware cost, performance, deployment, operability, and maintenance will be necessary to attain demonstrable step changes in offshore wind LCOE. Individual turbine technology evolution must consider multiple elements including: total wind plant capital cost relative to rated capacity; installation and deployment processes; reduced Operations & Maintenance (O&M) through improved reliability and serviceability; increased energy capture; as well as the benefits achieved through economies of scale.

Topic Area 2 of the Advanced Technology Demonstration Projects FOA is designed to expedite the development and deployment of innovative offshore wind systems. Applicant systems may leverage innovations in fabrication, installation methodology, O&M, or components without compromising technical viability and project timeline. The most promising applications will find and exploit synergies between these categories of cost improvement, thereby both lowering the overall system-level LCOE and ensuring relevance to near term industry deployment.

Specifically in Topic Area 2, applicants are encouraged to indicate in their applications how DOE or other Federal Agencies could apply non-monetary assistance in supporting the project, such as utilization of Research Leases in Federal Waters.

In Topic Area 2, multiple awards are anticipated for offshore wind plants optimized for specific geographic areas around the country. Each applicant must indicate its understanding of the concept of a local "hurdle" price, or the price at which offshore wind will be able to compete with other regional generation sources. Final awards may include a variety of geographic regions (e.g. Atlantic, Great Lakes, Pacific, Gulf of Mexico) and varying site-specific characteristics including water depth, bathymetry, metocean conditions, and other critical design criteria. Technical solutions may include bottom-fixed, deepwater floating, or freshwater systems, all optimized for the proposed site conditions in a given region. For example, projects proposed in the Great Lakes must address icing and those in the Gulf of Mexico, hurricanes. All applications must clearly document a feasible pathway to a competitive unsubsidized LCOE for the technical solutions that are proposed as being optimal.

The intent is to assess a range of offshore wind plant systems utilizing innovative technologies that are optimized for locations and where future development has the highest probability of commercial viability.

The final technology deployed should demonstrate a maturation level consistent with a commercial demonstration inclusive of the appropriate design verification and validation data. In order to help facilitate the use of innovative technology without compromising commercial success, activities under this FOA may include validation of advanced concepts at the pre-commercial prototype scale as part of the project development. The final turbine design deployed is expected to be compliant with the appropriate IEC standards as specified in IEC 61400-22.

Proposed activities should include instrumentation and collection of metocean, turbine, structure and integrated wind plant system engineering, performance, operations and cost data to validate design and

operation in a field environment. The specific data required will depend upon the maturity of the proposed hardware with more innovative concepts requiring a more comprehensive data set. For applications that propose multiple turbine projects, the DOE is interested in collecting and analyzing data that would help to better understand turbine-to-turbine interaction. As a minimum, the proposed activities should include collecting the field test data required to achieve type certification (if not already certified) as well as turbine and system performance data for a period of five (5) years after installation. Data collection will be in accordance with the relevant certification standards and requirements as specified in IEC 61400-22. All data will be provided to DOE and will be protected as defined in Section VIII.

Topic Area 2 will be executed in two Budget Periods:

- Budget Period I: It is envisioned that several projects will be selected for execution of Budget Period I. The period of performance is approximately one year from the award date. The result of Budget Period I will be:
  - A 100% front-end engineering design (FEED) up to and including full vendor quotes from all suppliers and independent verification of all capital, O&M and regulatory costs and proposed schedule from a DOE-approved third party and completion of the DOE NEPA process;
  - Detailed installation methods, and identification of operating and maintenance systems suited to the site; and
  - Initiation of all permitting or approval studies and illustration of a clear and realistic path to regulatory compliance and project completion.

  Budget Period II: Includes the final approval, fabrication, installation and commissioning stages of the project and validation of operating performance, reliability and O&M costs. At the end of Budget Period II, a project will be generating power and delivering it to an electric power grid. Revenue from electricity generation will belong to the awardee and shall not be used in the calculation of cost share. There will be a review of projects before they pass from Budget Period I to Budget Period II based upon progress as measured against the objectives of the FOA. The period of performance shall not exceed four years for Budget Period II.

B. Application Review Information and Evaluation Criteria for Topic Area 2

1. Initial Review Criteria

Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the applicant is eligible for an award; (2) all mandatory requirements are satisfied; and (3) the proposed project is responsive to the objectives of the funding opportunity announcement. If an application fails to meet these requirements, it may be deemed non-responsive and eliminated from full Merit Review. Responsive applications will then be reviewed by DOE to gauge the readiness of proposed projects with respect to permits and compliance with the National Environmental Policy Act (NEPA). The results of this DOE review will be provided to the Merit Review Panel for use in their evaluation process as described in Section II – C. Review and Selection Process.

2. Merit Review Criteria for Topic Area 2

The following merit review evaluation criteria will be used in the comprehensive evaluation of applications. For each criterion, the weighting (out of a total of 100%) is indicated to show the relative importance.

Criterion I: Technical Concept and Impact (Weight: 30%)

- The overall relevance and applicability of the technical concept and approach in addressing the specific objectives of the FOA;
- Convincing rationale that the proposed technology is ready for full-scale demonstration. Evidence should include an assessment of the Technology Readiness Level (TRL) as described in Appendix G, experimental data and results from smaller-scale work, papers, or other relevant prior work;
- Degree of innovation for the proposed approach and the extent to which the proposed concept offers advantages over other solutions or approaches from a cost of energy perspective;
- The potential of the proposed concept to advance the state of the art and the knowledge base of the industry;
- Likelihood that proposed project will lead to commercial development, including commercialization in the U.S. of the turbine and other technical solutions proposed for the project; and
- Proposed testing, data collection and performance validation plan to achieve IEC-like type certification; and quantify turbine and system technical and economic performance for the period of performance.

Criterion II: Reduction in Cost of Energy (Weight 30%)

- Extent to which a detailed cost of energy (COE) analysis, including all assumptions, calculations, and sources used to calculate the impact of the proposed design on COE, is presented for the proposed project with rigor, clarity, transparency and completeness. See Appendix H for example and calculation template to be submitted; and
- Extent to which the COE analysis for proposed project can be projected to show a clear path from the demonstration-scale to cost-effective commercial-scale deployment at 10 ¢/kWh or the local "hurdle" price at which offshore wind can compete with other regional generation sources without subsidizes.

Criterion III: Work Plan (Weight: 10%)

- The relevance and clarity of the goals and objectives of the project;
- The clarity and adequacy of the product-oriented work breakdown structure including detailed task descriptions and resource loaded schedule;
- The clarity and adequacy of project deliverables including:
  a) The specific end result;
  b) The proposed methods for publicly disseminating project-generated information, including but not limited to the final report, to the domestic offshore wind industry, and to related stakeholder sectors;
  c) Long term project ownership and management plan;
  d) Inclusion of a health and safety plan;
- The clarity, adequacy and timing of major milestones; and

- The feasibility of the overall project schedule.

Criterion IV: Project Management (Weight 10%)

- The knowledge and experience in project management techniques, methods, and practices to successfully complete the project scope on budget and on schedule;
- The project management practices that will be fully integrated with financial and business systems to measure project progress and enhance the probability of successful completion;
- The identification and consideration of risk, and the use of effective risk management and change control systems that will be put into full effect early in the project and used to mitigate impacts;
- The identification of logical decision points in the schedule for formal project management stage gates and related go/no-go decisions, including the qualitative and quantitative criteria for how these go/no-go decisions will be made. (This project management requirement is different from the DOE go/no-go decision that will take place between Budget Periods I and II of the project); and
- The approach to managing the team and ensuring communication among team members.

Criterion V: Team Qualifications (Weight: 20%)

- The extent to which the team includes demonstrated capacity to advance technology and identify and incorporate lessons learned from international offshore wind projects;
- The capability of the proposed team to address all aspects of the proposed work;
- The clarity and appropriateness of the roles of the team members;
- The relevant experience of each organization on the proposed team in performing similar projects and the allocation of responsibility commensurate with this experience;
- The adequacy of the education, professional training, technical skills, and work experience of the Principal Investigator (PI) and other key personnel, including personnel from team member organizations; and
- The level and reasonableness of the time commitment of the PI and other key personnel, including personnel from team member organizations.

3. Program Policy Factors for Topic Area 2

The selection official may consider the following program policy factors in the selection process:

1. Balance of complementary technologies to meet Program goals.
2. Comparatively significant benefits for the amount of funding requested.
3. Geographic diversity.
4. Greatest commercial potential for gigawatt-scale deployment in the US market.
5. Greatest advancement of the national knowledge base.
6. Highest long-term impact on the US offshore wind industry while ensuring that a majority of the Federal funding remains in the US.
7. Robustness of the proposed pathway to commercial viability.

C. Review and Selection Process

1. Application Submission and Merit Review Step 1: Application and Evaluation

See Section xx for Submission Forms and Guidelines. Applications that pass the initial review will be subject to a merit review in accordance with the guidance provided in the "Department of Energy Merit Review Guide for Financial Assistance". This guide is available at: http://www.management.energy.gov/documents/meritrev.pdf.

It is very important that the Project Executive Summary file that will be used during the Merit Review Process does not contain any Personally Identifiable Information as described in Appendix B.

2. Selection for Merit Review Step 2: Visit to DOE Headquarters (HQ)

Upon completion of Step 1, selected applicants will receive a formal invitation to participate in Step 2: Visit to DOE HQ. Applicants will be notified by the Merit Review Committee Chairperson to prepare for and schedule the Visit to DOE HQ during the week of (TBD). The Visit to DOE HQ will consist of the following:

a.) Oral presentation of application material (~1 hour)

b.) Question, answer, and clarifications with Merit Review Panel (~2 hours)

- Merit Review Panel will develop a bank of 25 clarification questions during the Merit Review Process.
- This 25 question bank will be provided to the Step 2 applicants prior to the Visit to DOE HQ.
- Merit Review Panelists will use this 25 question bank as a guide during the Visit to DOE HQ.
- Applicants will not be allowed an opportunity to revise their applications.

Those applicants not selected for Merit Review Step 2 will also be notified as such by the Merit Review Committee Chairperson upon completion of Step 1.

3. Selection

Applicants that are selected for negotiation of an award will be notified by the Merit Review Committee Chairperson.

The Selection Official may consider the Merit Review Committee's recommendation, program policy factors, and the amount of funds available when making selections.

4. Discussions and Award

Government Discussions with Applicant

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR part 600; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the

applicant.

D. Anticipated Notice of Selection and Award Dates

DOE anticipates notifying applicants selected for award by **August 2012** and making awards by **September 2012,** subject to the availability of appropriations.

SECTION IV – AWARD INFORMATION

A. Type of Award Instrument

For entities other than DOE Federally Funded Research and Development Centers (FFRDCs), DOE anticipates awarding cooperative agreements or technology investment agreements (TIAs) under this Funding Opportunity Announcement. See Section VI.B.4 for information about the nature of the Federal Involvement.

For DOE FFRDCs, DOE anticipates providing funding under existing contracts with DOE FFRDC Contractors.

B. Estimated Funding

Approximately $TBD in DOE funding is expected to be available for new awards under this announcement, subject to Congressional appropriations, with funding for each of the Topic Areas as shown in Table 1.

C. Type of Application

DOE will accept only new applications under this announcement (i.e., applications for renewals of existing DOE funded projects will not be considered).

SECTION V – ALL TOPIC AREAS - ELIGIBILITY INFORMATION

A. Eligible Applicants

The following entities are eligible to apply for this announcement: (1) institutions of higher education; (2) nonprofit and for-profit private entities; (3) state and local governments; and (4) consortia of entities (1) through (3). All types of domestic entities are eligible to apply as prime applicants, excluding DOE National Laboratory Contractors, other Federal agencies, non-DOE Federally Funded Research and Development Center Contractors(FFRDC), and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.

Foreign entities are not allowed to apply as prime applicants. However, foreign entities may be a team member or participant on a domestic entity's application, provided that the Federal funding for the work to be performed by foreign entities does not exceed 50% of the total Federal funding requested for the project. Applicants with foreign team members must explain how U.S. interest will be maintained. It is anticipated that U.S. interests will be maintained by the selection of offshore demonstration site(s) in U.S. waters, by the use of U.S.-produced goods and services to the fullest extent practicable, and by dissemination of the results and lessons learned of the project to domestic stakeholders in the offshore wind industry.

B. Cost Sharing

Minimum Non-Federal Cost Share Requirements are as follows :

Topic Area 1 at least 50%

Topic Area 2
- Budget Period I at least 20%
- Budget Period II at least 50%

Non-Federal Cost Share Requirements represent a percentage of total allowable project costs and must come from non-Federal sources unless otherwise allowed by law.

The total allowable cost of a project is defined as the sum of the Government share, including FFRDC contractor costs if applicable, and the recipient share of allowable costs. (See 10 CFR Part 600 and Appendix C for applicable cost sharing requirements and information.)

APPENDIX A – DEFINITIONS

"Amendment" means a revision to a Funding Opportunity Announcement.

"**Applicant**" means the legal entity or individual signing the application. This entity or individual may be one organization or a single entity representing a group of organizations (such as a team or consortium) that has chosen to submit a single application in response to a Funding Opportunity Announcement.

"**Application**" means the documentation submitted in response to a Funding Opportunity Announcement.

"Authority Having Jurisdiction (AHJ)" is a governmental agency or sub-agency that regulates the construction process.

"Authorized Organization Representative (AOR)" is the person with assigned privileges who is authorized to submit grant applications through Grants.gov on behalf of an organization. The privileges are assigned by the organization's E-Business Point of Contact designated in the CCR.

"**Award**" means the written documentation executed by a DOE Contracting Officer, after an applicant is selected, which contains the negotiated terms and conditions for providing financial assistance to the applicant. A financial assistance award may be either a grant or a cooperative agreement.

"**Budget**" means the cost expenditure plan submitted in the application, including both the DOE contribution and the applicant cost share.

"Central Contractor Registration (CCR)" is the primary database which collects, validates, stores and disseminates data in support of agency missions. Funding Opportunity Announcements which require application submission through FedConnect or Grants.gov require that the organization first be registered in the CCR at http://www.grants.gov/CCRRegister.

"**Consortium (plural consortia)**" means the group of organizations or individuals that have chosen to submit a single application in response to a Funding Opportunity Announcement.

"**Contracting Officer**" means the DOE official authorized to execute awards on behalf of DOE and who is responsible for the business management and non-program aspects of the financial assistance process.

"**Cooperative Agreement**" means a financial assistance instrument used by DOE to transfer money or property when the principal purpose of the transaction is to accomplish a public purpose of support or stimulation authorized by Federal statute, and substantial involvement (see definition below) is anticipated between DOE and the applicant during the performance of the contemplated activity.

"**Cost Sharing**" means the respective share of total project costs to be contributed by the applicant and by DOE. The percentage of applicant cost share is to be applied to the total project cost (i.e., the sum of applicant plus DOE cost shares) rather than to the DOE contribution alone.

"Credential Provider" is an organization that validates the electronic identity of an individual through electronic credentials, PINS, and passwords for Grants.gov and FedConnect. Funding Opportunity Announcements which require application submission through Grants.gov require that the individual applying on behalf of an organization first be registered with the Credential Provider at http://www.grants.gov/CCRRegister.

"Data Universal Numbering System (DUNS) Number" is a unique nine-character identification number issued by Dun and Bradstreet (D&B). Organizations must have a DUNS number prior to registering in the CCR. Call 1-866-705-5711 to receive one free of charge. http://www.grants.gov/applicants/request_duns_number.jsp

"E-Business Point of Contact (POC)" is the individual who is designated as the Electronic Business Point of Contact in the CCR registration. This person is the sole authority of the organization with the capability of designating or revoking an individual's ability to conduct CCR transactions.

"E-Find" is a Grants.gov webpage where you can search for Federal Funding Opportunities in FedGrants. http://www.grants.gov/search/searchHome.do

"**Financial Assistance**" means the transfer of money or property to an applicant or participant to accomplish a public purpose of support authorized by Federal statute through grants or cooperative agreements and sub-awards. For DOE, it does not include direct loans, loan guarantees, price guarantees, purchase agreements, Cooperative Research and Development Agreements (CRADAs), or any other type of financial incentive instrument.

"FedConnect" is where federal agencies post opportunities and make awards via the web. Any applicant can view public postings without registering. However, registered users have numerous added benefits including the ability to electronically submit applications / responses to the government directly through this site. https://www.fedconnect.net/FedConnect/

"Federally Funded Research and Development Center (FFRDC)" means a research laboratory as defined by Federal Acquisition Regulation 35.017.

"Funding Opportunity Announcement (FOA)" is a publicly available document by which a Federal agency makes known its intentions to award discretionary grants or cooperative agreements, usually as a result of competition for funds. Funding opportunity announcements may be known as program announcements, notices of funding availability, solicitations, or other names depending on the agency and type of program.

"Grant" means a financial assistance instrument used by DOE to transfer money or property when the principal purpose of the transaction is to accomplish a public purpose of support or stimulation authorized by Federal statute, and no substantial involvement is anticipated between DOE and the applicant during the performance of the contemplated activity.

"Grants.gov" is the "storefront" web portal which allows organizations to electronically find grant opportunities from all Federal grant-making agencies. Grants.gov is the single access point for over 900 grant programs offered by the 26 Federal grant-making agencies. http://www.grants.gov

"Indian Tribe" means any Indian tribe, band, nation, or other organized group or community, including Alaska Native village or regional or village corporation, as defined in or established

pursuant to the Alaska Native Claims Settlement Act (85 Stat. 688)[43 U.S.C. § 1601 et seq.], which are recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

"**Key Personnel**" mean the individuals who will have significant roles in planning and implementing the proposed project on the part of the applicant and participants, including FFRDCs.

"Marketing Partner Identification Number (MPIN)" is a very important password designated by your organization when registering in CCR. The E-Business Point of Contact will need the MPIN to assign privileges to the individual(s) authorized to perform CCR transactions on behalf of your organization. The MPIN must have 9 digits containing at least one alpha character (must be in capital letters) and one number (no spaces or special characters permitted).

"**Participant**" for purposes of this Funding Opportunity Announcement only, means any entity, including team or consortium members, or other business arrangement (including all parties to the application at any tier), responding to the Funding Opportunity Announcement.

"Principal Investigator" refers to the technical point of contact/Project Manager for a specific project award.

"**Project**" means the set of activities described in an application or other document that is approved by DOE for financial assistance (whether such financial assistance represents all or only a portion of the support necessary to carry out those activities).

"Proposal" is the term used to describe the documentation submitted in response to a Funding Opportunity Announcement. Also see Application.

"Recipient" means the organization, individual, or other entity that receives a financial assistance award from DOE, is financially accountable for the use of any DOE funds or property provided for the performance of the project, and is legally responsible for carrying out the terms and condition of the award.

"**Selection**" means the determination by the DOE Selection Official that negotiations take place for certain projects with the intent of awarding a financial assistance instrument.

"Selection Official" means the DOE official designated to select applications for negotiation toward award under a subject Funding Opportunity Announcement.

"**Substantial Involvement**" means involvement on the part of the Government. DOE's involvement may include shared responsibility for the performance of the project; providing technical assistance or guidance which the applicant is to follow; and the right to intervene in the conduct or performance of the project. Such involvement will be negotiated with each applicant prior to signing any agreement.

"Technology Investment Agreement (TIA)" is a type of assistance instrument used to support or stimulate research projects involving for-profit firms, especially commercial firms that do business primarily in the commercial marketplace. TIAs are different from grants and cooperative agreements in that the award terms may vary from the Government-wide standard terms (See DOE TIA regulations at 10 CFR Part 603). The primary purposes for including a TIA in the type of available award instruments are to encourage non-traditional Government contractors to participate

in an R&D program and to facilitate new relationships and business practices. A TIA can be particularly useful for awards to consortia (See 10 CFR 603.225(b) and 603.515, Qualification of a consortium).

"**Total Project Cost**" means all the funds to complete the effort proposed by the applicant, including DOE funds (including direct funding of any FFRDC) plus all other funds that will be committed by the applicant as cost sharing.

"Tribal Energy Resource Development Organization or Group" means an "organization" of two or more entities, at least one of which is an Indian Tribe (see "Indian Tribe" above) that has the written consent of the governing bodies of all Indian Tribes participating in the organization to apply for a grant or loan, or other assistance under 25 U.S.C. § 3503.

APPENDIX B – PERSONALLY IDENTIFIABLE INFORMATION

In responding to this announcement, applicants must ensure that Protected Personally Identifiable Information (PII) is not included in the following documents: Public Abstract, Project Narrative, Resumes or Budget. These documents will be used by the Merit Review Committee in the review process to evaluate each application. PII is defined by the Office of Management and Budget (OMB) and DOE as:

Any information about an individual maintained by an agency, including but not limited to, education, financial transactions, medical history, and criminal or employment history and information that can be used to distinguish or trace an individual's identity, such as their name, social security number, date and place of birth, mother's maiden name, biometric records, etc., including any other personal information that is linked or linkable to an individual.

This definition of PII can be further defined as: (1) Public PII and (2) Protected PII.

a. **Public PII:** PII found in public sources such as telephone books, public websites, business cards, university listing, etc. Public PII includes first and last name, address, work telephone number, email address, home telephone number, and general education credentials.

b. **Protected PII:** PII that requires enhanced protection. This information includes data that if compromised could cause harm to an individual such as identity theft.

Listed below are examples of Protected PII that applicants must not include in the files listed above to be evaluated by the Merit Review Committee.

- Social Security Numbers in any form
- Place of Birth associated with an individual
- Date of Birth associated with an individual
- Mother's maiden name associated with an individual
- Biometric record associated with an individual
- Fingerprint
- Iris scan
- DNA
- Medical history information associated with an individual
- Medical conditions, including history of disease
- Metric information, e.g. weight, height, blood pressure
- Criminal history associated with an individual
- Employment history and other employment information associated with an individual
- Ratings
- Disciplinary actions
- Performance elements and standards (or work expectations) are PII when they are so intertwined with performance appraisals that their disclosure would reveal an individual's performance appraisal
- Financial information associated with an individual
- Credit card numbers
- Bank account numbers
- Security clearance history or related information (not including actual clearances held)

Listed below are examples of Public PII that applicants may include in the files listed above to be evaluated by the Merit Review Committee:

- Phone numbers (work, home, cell)
- Street addresses (work and personal)
- Email addresses (work and personal)
- Digital pictures
- Medical information included in a health or safety report
- Employment information that is not PII even when associated with a name
- Resumes, unless they include a Social Security Number
- Present and past position titles and occupational series
- Present and past grades
- Present and past annual salary rates (including performance awards or bonuses, incentive awards, merit pay amount, Meritorious or Distinguished Executive Ranks, and allowances and differentials)
- Present and past duty stations and organization of assignment (includes room and phone numbers, organization designations, work email address, or other identifying information regarding buildings, room numbers, or places of employment)
- Position descriptions, identification of job elements, and those performance standards (but not actual performance appraisals) that the release of which would not interfere with law enforcement programs or severely inhibit agency effectiveness
- Security clearances held
- Written biographies (e.g. to be used in a program describing a speaker)
- Academic credentials
- Schools attended
- Major or area of study
- Personal information stored by individuals about themselves on their assigned workstation or laptop unless it contains a Social Security Number

APPENDIX C – COST SHARE INFORMATION

Cost Sharing or Cost Matching

The terms "cost sharing" and "cost matching" are often used synonymously. Even the DOE Financial Assistance Regulations, 10 CFR Part 600, use both of the terms in the titles specific to regulations applicable to cost sharing. DOE almost always uses the term "cost sharing," as it conveys the concept that **non-federal share is calculated as a percentage of the Total Project Cost.** An exception is the State Energy Program Regulation, 10 CFR Part 420.12, State Matching Contribution. Here "cost matching" for the non-federal share is calculated as a percentage of the federal funds only, rather than the Total Project Cost.

How Cost Sharing Is Calculated

As stated above, cost sharing is calculated as a percentage of the Total Project Cost. Following is an example of how to calculate cost sharing amounts for a project with $1,000,000 in federal funds with a minimum 20% non-federal cost sharing requirement:

Formula: Federal share ($) divided by Federal share (%) = Total Project Cost
Example: $1,000,000 divided by 80% = $1,250,000

Formula: Total Project Cost ($) minus Federal share ($) = Non-federal share ($)
Example: $1,250,000 minus $1,000,000 = $250,000

Formula: Non-federal share ($) divided by Total Project Cost ($) = Non-federal share (%)
Example: $250,000 divided by $1,250,000 = 20%

See the sample cost share calculation for a blended cost share percentage below. **Keep in mind that FFRDC funding is DOE funding.**

What Qualifies For Cost Sharing

While it is not possible to explain what specifically qualifies for cost sharing in one or even a couple of sentences, in general, if a cost is allowable under the cost principles applicable to the organization incurring the cost and is eligible for reimbursement under a DOE grant or cooperative agreement, then it is allowable as cost share. Conversely, if the cost is not allowable under the cost principles and not eligible for reimbursement, then it is not allowable as cost share. In addition, costs may not be counted as cost share if they are paid by the Federal Government under another award unless authorized by Federal statute to be used for cost sharing.

The rules associated with what is allowable as cost share are specific to the type of organization that is receiving funds under the grant or cooperative agreement, though are generally the same for all types of entities. The specific rules applicable to:

- Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations are found at 10 CFR600.123;
- State and Local Governments are found at 10 CFR600.224;
- For-profit Organizations are found at 10 CFR600.313.

In addition to the regulations referenced above, other factors may also come into play such as timing of donations and length of the project period. For example, the value of ten years of donated maintenance on a project that has a project period of five years would not be fully allowable as cost share. Only the value for the five years of donated maintenance that corresponds to the project period is allowable and may be counted as cost share.

Additionally, DOE generally does not allow pre-award costs for either cost share or reimbursement when these costs precede the signing of the appropriation bill that funds the award. In the case of a competitive award, DOE generally does not allow pre-award costs prior to the signing of the Selection Statement by the DOE Selection Official.

Following is a link to the DOE Financial Assistance Regulations. You can click on the specific section for each Code of Federal Regulations reference mentioned above.

DOE Financial Assistance Regulations:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=98a996164312e8dcf0df9c22912852b0&rgn=div5&view=text&node=10:4.0.1.3.9&idno=10

As stated above, the rules associated with what is allowable cost share are generally the same for all types of organizations. Following are the rules found to be common, but again, the specifics are contained in the regulations and cost principles specific to the type of entity:

(A) *Acceptable contributions.* All contributions, including cash contributions and third party in-kind contributions, must be accepted as part of the recipient's cost sharing if such contributions meet all of the following criteria:

(1) They are verifiable from the recipient's records.

(2) They are not included as contributions for any other federally-assisted project or program.

(3) They are necessary and reasonable for proper and efficient accomplishment of project or program objectives.

(4) They are allowable under the cost principles applicable to the type of entity incurring the cost as follows:

(a) *For-profit organizations.* Allowability of costs incurred by for-profit organizations and those nonprofit organizations listed in Attachment C to OMB Circular A–122 is determined in accordance with the for-profit costs principles in 48 CFR Part 31 in the Federal Acquisition Regulation, except that patent prosecution costs are not allowable unless specifically authorized in the award document.

(b) *Other types of organizations.* Allowability of costs incurred by other types of organizations that may be subrecipients under a prime award is determined as follows:

(i) *Institutions of higher education.* Allowability is determined in accordance with OMB Circular No. A-21 -- Cost Principles for Educational Institutions

(ii) *Other nonprofit organizations.* Allowability is determined in accordance with OMB Circular A-122, Cost Principles for Non-Profit Organizations

(iii) *Hospitals.* Allowability is determined in accordance with the provisions of 45 CFR Part 74, Appendix E, Principles for Determining Costs Applicable to Research and Development Under Grants and Contracts with Hospitals

(iv) *Governmental organizations.* Allowability for State, local, or federally recognized Indian tribal government is determined in accordance with OMB Circular No. A-87, Cost Principles for State, Local, and Indian Tribal Governments

(5) They are not paid by the Federal Government under another award unless authorized by Federal statute to be used for cost sharing or matching.

(6) They are provided for in the approved budget.

(B) *Valuing and documenting contributions*

(1) *Valuing recipient's property or services of recipient's employees.* Values are established in accordance with the applicable cost principles, which mean that amounts chargeable to the project are determined on the basis of costs incurred. For real property or equipment used on the project, the cost principles authorize depreciation or use charges. The full value of the item may be applied when the item will be consumed in the performance of the award or fully depreciated by the end of the award. In cases where the full value of a donated capital asset is to be applied as cost sharing or matching, that full value must be the lesser or the following:

(a) The certified value of the remaining life of the property recorded in the recipient's accounting records at the time of donation; or
(b) The current fair market value. If there is sufficient justification, the contracting officer may approve the use of the current fair market value of the donated property, even if it exceeds the certified value at the time of donation to the project. The contracting officer may accept the use of any reasonable basis for determining the fair market value of the property.

(2) *Valuing services of others' employees.* If an employer other than the recipient furnishes the services of an employee, those services are valued at the employee's regular rate of pay, provided these services are for the same skill level for which the employee is normally paid.

(3) *Valuing volunteer services.* Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as cost sharing or matching if the service is an integral and necessary part of an approved project or program. Rates for volunteer services must be consistent with those paid for similar

work in the recipient's organization. In those markets in which the required skills are not found in the recipient organization, rates must be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation.

(4) *Valuing property donated by third parties.*

(a) Donated supplies may include such items as office supplies or laboratory supplies. Value assessed to donated supplies included in the cost sharing or matching share must be reasonable and must not exceed the fair market value of the property at the time of the donation.

(b) Normally only depreciation or use charges for equipment and buildings may be applied. However, the fair rental charges for land and the full value of equipment or other capital assets may be allowed, when they will be consumed in the performance of the award or fully depreciated by the end of the award, provided that the contracting officer has approved the charges. When use charges are applied, values must be determined in accordance with the usual accounting policies of the recipient, with the following qualifications:

(i) The value of donated space must not exceed the fair rental value of comparable space as established by an independent appraisal of comparable space and facilities in a privately-owned building in the same locality.

(ii) The value of loaned equipment must not exceed its fair rental value.

(5) *Documentation.* The following requirements pertain to the recipient's supporting records for in-kind contributions from third parties:

(a) Volunteer services must be documented and, to the extent feasible, supported by the same methods used by the recipient for its own employees.

(b) The basis for determining the valuation for personal services and property must be documented

APPENDIX F – NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) GUIDANCE

Overview of the NEPA Process

In 1969 Congress enacted the National Environmental Policy Act (NEPA) in 1969, which applies to all major federal actions that may affect the quality of human health and the environment. Per 40 CFR § 1508.18, major federal actions are defined as "projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies." Accordingly, DOE is required to maintain compliance with NEPA in the administration of federal financial assistance awards.

NEPA is applicable to the entire scope and budget of DOE awarded projects, including activities conducted with DOE funding as well as those activities conducted utilizing recipient cost share funding. Additionally, because NEPA applies to all major federal actions, NEPA review is required for all types of DOE funded projects (research, development, demonstration, etc.) and required regardless of the property ownership of the project site (public, state-owned, private, etc.).

Applicants should carefully consider and should seek legal counsel or other expert advice before taking any action related to the proposed project that could have an adverse affect on the environment or limit the choice of reasonable alternatives prior to DOE providing either a NEPA clearance or a final NEPA decision regarding the project.

NEPA Document Preparation

Before taking an irreversible or irretrievable action, the applicant must provide enough information to enable DOE to determine the level of review required under NEPA, to support preparation of the NEPA document, and obtain the final NEPA determination. This may involve compliance with all local, state, and federal statutory regulations.

The recipient must inform DOE of all project work that would occur on lands owned or administered by other federal, state, and/or local agencies (i.e. Bureau of Land Management, U.S. Forest Service, state and/or county owned lands, etc.) and must obtain all necessary regulatory approvals for project activities that would occur on said lands. DOE must be informed of any other federal funding sources that may be involved in project activities. In circumstances where other federal agencies have jurisdiction by law for NEPA compliance either as a land management agency or a federal funding source, DOE will work with those agencies to determine the appropriate lead and/or cooperating status of each agency involved prior to determining the level of NEPA analysis required by project activities.

Regardless of the level of NEPA documentation and review, DOE is responsible for complying with applicable federal policies, statutes, and/or regulations, including but not limited to:

- National Historical Preservation Act (NHPA), including Native American Tribal rights
- Paleoentological Resources Preservation Act
- Endangered Species Act
- Migratory Bird Species Act
- Golden and Bald Eagle Protection Act
- Clean Air Act
- Clean Water Act
- Rivers and Harbors Act

- Marine Mammal Protection Act
- Magnuson-Stevens Fishery Conservation and Management Act
- Coastal Zone Management Act
- Farmland Protection Policy Act
- Occupational Safety and Health Act
- Pollution Prevention Act
- Toxic Substances Act
- 10 CFR 1022, "Compliance with Floodplain/Wetlands Environmental Review Requirements"

Recipients are responsible for identifying and complying with applicable Federal, state, and local statutes, rules, and regulations associated with the proposed project.

DOE frequently consults under Section 106 of the National Historic Preservation Act of 1966 (NHPA) and Section 7 of the Endangered Species Act. Specifically, Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies to take into account the effects of their undertaking on historic properties, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The regulations also place major emphasis on consultation with Indian tribes and Native Hawaiian organizations, in keeping with the 1992 amendments to NHPA. The responsible Federal agency first determines whether it has an undertaking that is a type of activity that could affect historic properties. Historic properties are properties that are included in the National Register of Historic Places or that meet the criteria for the National Register. If so, the agency must identify the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer to consult with during the process. It should also plan to involve the public, and identify other potential consulting parties. If it determines that it has no undertaking, or that its undertaking is a type of activity that has no potential to affect historic properties, the agency has no further Section 106 obligations.

Section 7 of the Endangered Species Act, 16 U.S.C. Section 1536(a)(2), requires all federal agencies to consult with the National Marine Fisheries Service (NMFS) for marine and anadromus species, or the United States Fish and Wildlife Services (FWS) for fresh-water and wildlife, if they are proposing an "action" that may affect listed species or their designated habitat. Each federal agency is to insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. This is done through consultation.

Post-selection for Negotiation of Award NEPA Process Details

Once the recipient provides DOE all of the necessary information to make a NEPA determination, DOE will decide if a categorical exclusion (CX), an environmental assessment (EA) or an environmental impact statement (EIS) is the appropriate level of environmental review.

A CX may be applied when DOE determines that the proposed project falls within a category of actions that DOE has determined do not individually or cumulatively have a significant effect on the human environment. If the proposed project does not fall under an established CX, an EA or an EIS is required. A list of categorically excludable actions may be found at 10 CFR 1021, Appendices A to D of Subpart D.

An EA is a concise public document for which a federal agency is responsible that serves to briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact, aid an agency's compliance with the NEPA when no EIS is necessary, and facilitate preparation of an EIS when one is necessary.

An EIS is a detailed written statement that analyzes the environmental impact of the proposed action, any adverse environmental effects that cannot be avoided should the proposal be implemented, alternatives to the proposed action, the relationship between local short-term uses on the human environment and the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented.

If DOE determines an EA or EIS should be prepared, the DOE NEPA and project staff will work with the applicant to identify the scope of the project and to mutually agree on the project description. DOE may, as appropriate, adopt an EA or EIS prepared by another federal agency (e.g., U.S. Department of the Interior) for the corresponding project.

After the award is issued, in the event the scope will expand beyond the approved activities, the recipient must notify DOE in advance and may be required to submit additional information on the new activity and its impacts. If DOE determines that no action is necessary, the recipient will be notified. However, in the event DOE determines that a revision to an existing NEPA document or preparation of a new NEPA document is required, the recipient will not be allowed to proceed with the new activity until after another NEPA determination has been made.